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FM 17-15

WAR DEPARTMENT

ARMORED FORCE FIELD MANUAL

COMBAT PRACTICE FIRING ARMORED FORCE UNITS

May 15, 1942

FM 17–15

ARMORED FORCE FIELD MANUAL

COMBAT PRACTICE FIRING ARMORED FORCE UNITS

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(For explanation of symbols see FM 21–6.)

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ARMORED FORCE FIELD MANUAL

COMBAT PRACTICE FIRING

ARMORED FORCE UNITS

CHAPTER 1

GENERAL

		Paragraphs
SECTION I.	General	1–4
II.	Ranges	5–9
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SECTION I

GENERAL

■ 1. DEFINITION.—Combat practice firing is that form of training wherein tactical units solve a problem involving a tactical situation or a series of tactical situations in which service ammunition is fired at targets representing an enemy.

■ 2. PLACE IN TRAINING.—Combat practice firing is the concluding and most important phase in the training of small units in marksmanship and gunnery. Stress must be placed in such a way that all preceding phases of this training are preparatory steps leading logically to combat practice firing.

■ 3. PURPOSE.—The purpose of combat firing is first to teach the value of coordination and teamwork to the members of a tactical unit, whether they are the tank crews, weapon crews or members of a rifle squad. Second, to teach the value of coordination between tactical units, such as squads of a rifle platoon, or the tanks of a tank platoon. Third, to train all units to conserve their ammunition by firing only at profitable targets within effective range. Finally, to train leaders in the coordination of the fire power of their weapons and in target designation methods that are sound, clear, and concise.

■ 4. SCOPE.—A course in combat firing should include situations involving the units in attack, tank versus tank, defense

and security; special emphasis being placed on the attack and in tank versus tank action. This training is limited only by the availability of ammunition and the imagination of the instructor. Careful planning is of the utmost importance, to insure that the maximum instructional value is received for the ammunition expended.

SECTION II

RANGES

■ 5. EQUIPMENT.—Careful and precise planning in advance is essential to prevent any interruption in the training schedule. Necessary supplies and ranges should be requested far enough in advance to insure that preliminary construction is completed and ready for the first day of firing. To hold up training for last minute arrangements reduces interest and hence instructional value.

■ 6. TERRAIN.—*a*. The availability of ground largely determines the question of selection of terrain for combat ranges. Varied ground of large extent suitable for the employment of all weapons within an armored division should be selected. If such ground is not to be had in the vicinity of the units about to engage in combat firing, then arrangements should be made for the units to move, for the duration of the training phase, to a location where the required terrain is available. There should be no improvisations or assumptions made in regard to terrain features.

b. Where possible, problems should be run over ground unfamiliar to the troops. Fixed terrain or an unvaried tactical situation soon becomes an old story to the using troops, therefore, to maintain interest, units should not be required to run through the same course too many times without varying the problem or changing to new ground.

■ 7. TARGETS.—*a*. Targets will be those made locally from available materials and those furnished by the Ordnance Department. Very often natural terrain features offer suitable targets.

b. With field targets furnished by the Ordnance Department, personnel may be represented by E and F silhouette targets mounted on stakes, while machine guns and antitank

guns can be represented by 4' x 5' frames covered with paper and accompanied by small colored flags to denote the type of weapon; several E targets grouped about the frame could represent the operating personnel. For moving target construction and operation see BFM 23–80. Where only small arms ammunition is used, pits or shelters may be utilized on the flanks of the course to operate surprise targets.

c. Targets should be located with due regard to cover and all around area defense that would likely be used by an intelligent enemy. Tactical employment of the armies of our nation's enemies should be considered and situation set up accordingly.

■ 8. TANK VERSUS TANK.—For subcaliber firing of antitank weapons and tank versus tank, valuable training may be obtained by stripping one or more tanks of vulnerable accessories (lights, guns, etc.) and firing caliber .30 ammunition at them. Radio contact can be maintained with the target tank for controlling its maneuvers.

■ 9. SAFETY.—*a.* The range officer is responsible that the danger areas are properly policed, that roads have been blocked and that range guards have been posted and flags placed.

b. The officer in charge of firing is responsible for the safe conduct thereof. He will see that all weapons are not loaded and that the command to commence firing is not given until the range is cleared; that direction of fire conforms to the local requirements of safety, and that firing is ceased immediately if safety requirements are violated.

c. In problems where rifle units are involved in fire and movement, those participating in the movement will lock their pieces during such movement, except during assault fire. An officer or noncommissioned officer will be detailed as safety officer who will enforce the observance of these precautions and observe the fire of the covering elements. He will stop the fire of any weapon which in his opinion endangers the advanced elements.

d. Additional safety precautions are necessary when other than small arms ammunition is fired.

SECTION III

CONDUCT OF TRAINING

■ 10. GENERAL.—*a*. Combat practice firing like marksmanship requires ranges, equipment and supplies that must be prepared or obtained in advance. Instructors must know these details as well as being well-grounded in the combat principles and technique of fire of the units being instructed. Time required for preparation cannot be given as it depends upon local conditions; however, unless sufficient time is allowed, instruction will suffer.

b. The value of the instruction depends upon the thoroughness with which the marksmanship training has been carried out and the ability of the instructor to maintain the interest of the participants. Interest is held by variety, tangible evidence of the firing and the ingenuity of the instructor.

c. Instruction should be progressive, starting with the smallest unit, i. e., the tank crew, gun crew or squad. Subcaliber firing for the mortars, 37-mm and 75-mm guns should be done before firing problems with service ammunition to obtain the maximum instructional value from the service ammunition.

■ 11. METHODS.—The best methods of instruction for combat firing are demonstrations, fire problems and competitions.

a. Demonstrations.—The use of specially trained troops to demonstrate the solutions of tactical problems is an excellent method for showing quickly the proper actions in combat firing. Included in such demonstrations should be flagrant violations of tactical principles as well as sound solutions. The application of combat principles and technique of fire are points to be noted in particular. It must be understood, however, that all problems are not solved alike, and that there is usually more than one correct method for solving any problem. Where terrain is limited and the same problem is given to all units, the units after completing the exercise should be permitted to observe the solution of others.

b. Fire problems.—Combat firing problems are the nearest approach to actual combat conditions in the entire scheme of training. Problems should be designed so as to require the

leader to make an estimate of the situation, issue his orders, and supervise the execution of such and subsequent orders. The state of training of the unit will be shown by the teamwork and fire distribution in carrying out the solution. Problems are designed, also, to encourage, as far as practicable, initiative of each individual.

c. Competitions.—After the troops have had some experience in firing, competitions between units may be held. This is one of the best ways to arouse and maintain interest in training. Scores based on fire and execution should be posted promptly. In order to determine the proficiency of the units two or more officers may be convened as a board to grade the various units. Great care should be exercised in judging these competitions as any error in judging will tend to lower the morale of the participants.

■ 12. PREPARATION.—*a.* Much care and thought should be given the preparation of all problems. They should be designed to fit the terrain without assuming or disregarding features of the ground. The mission of the unit and the next higher unit should be clear and logical for the situation. Adjacent troops should be considered and located by either targets, flags or terrain features. In working up the problem it must be borne in mind that it is to develop the initiative of the leader and teamwork of the unit (see FM 21–5 and TF 7–295).

b. The framing of a problem divides itself into two parts, one the information for the participating unit, and the other, the instructions to the umpire and his assistants.

(1) Information for the participating unit.
- (*a*) Designation of unit.
- (*b*) Situation.
- (*c*) Requirement.
- (*d*) Restrictions.
- (*e*) Remarks.

(2) Instructions to the umpire (see FM 105–5).
- (*a*) Object.
- (*b*) Preparation of the range.
- (*c*) Points for criticism.
- (*d*) Remarks.

c. For writing up combat practice firing problems see form given in the appendix.

■ 13. CHECK LIST.—The umpires for a problem should be supplied with some form of a check list covering the various points that the problem is designed to bring out. Such a list will be valuable to the umpire in his critique or final report. The form given in the appendix may be used as a guide in preparing such a list.

■ 14. PRESENTATION OF PROBLEMS.—*a.* All combat practice firing problems will be supervised by an officer who will be known as the umpire. It is his duty to conduct the exercise, observe the performance, conduct the critique and record the results in a report. He should be provided with the necessary assistants whose duties he will prescribe.

b. After all preliminary arrangements have been made and everything is in readiness to proceed with the problem, the leader is oriented on the ground, the situation explained, and the requirement made known. The leader then explains the situation to his unit and by questioning various men insures that the problem is thoroughly understood by all. If any units are to observe the conduct of the exercise the umpire should see that they are also made familiar with the situation. The leader then proceeds with his solution. In the earlier stages of training, the value of the instruction may be increased by suspending the exercise and commenting upon errors at the time they are made. In the later stages, however, and particularly when the problem is given as a test or in a competition the exercise should be permitted to continue regardless of errors. As a general rule the umpire will interfere as little as possible during the progress of the exercise, the leader being allowed to solve the problem in his own way and required to abide by his own mistakes and those of his subordinates.

■ 15. CRITIQUE.—*a.* The basis of all good instruction is intelligent, tactful, and constructive criticism. This principle should be the aim of the critique. It is given by the umpire after receiving the reports from his assistants and constitutes a discussion of the solution offered and a comparison

with other possible solutions. It is best given on the ground immediately after the conclusion of the exercise.

b. An officer conducting a critique should commend what was well done and call attention to what was poorly or incorrectly done. Where errors have been committed, a correct solution should be offered in such a manner that the whole unit concerned will be benefited by the criticism. In making corrections the instructor should avoid ridicule, sarcasm, or any remarks which might be harmful to interest or initiative or might lead to a dread of responsibility in the minds of the men.

c. Much depends upon the personality of the umpire for it will often be his duty to call attention to errors and faults that may be due to lack of judgment, lack of knowledge, or lack of skill. His method should be such as to give no offense to his hearers. The illustration of principles and intelligent criticism depends solely upon the ingenuity and alertness of the umpire. The tactical significance of the exercise must be kept foremost in the discussion. Effort should be made to picture the situation as it would be were it real instead of assumed. As much of the battlefield confusion and turmoil as possible should be brought to mind. Failures to apply tactical principles properly are often due to a lack of imagination on the part of the troops and to a misconception as to the nature of modern combat.

d. The critique should not convey the impression that there is only one correct method of solving the problem. Such a misconception is apt to lead to the adoption of fixed forms, a playing up to the ideas of the umpire, and a resulting destruction of initiative and independent thought.

CHAPTER 2

TANK UNITS

(Light, Medium, and Heavy)

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SECTION I

GENERAL

■ 16. PRELIMINARY TRAINING.—*a.* Combat practice firing will be given only after the units have completed thorough courses in combat principles and marksmanship.

b. Instruction in combat principles can be given best on the sand table and in practical terrain exercises. Training immediately prior to combat firing should be in the nature of preliminary exercises involving various tactical problems for all sections and platoons.

c. All preliminary and instruction firing must develop teamwork. Gunners and loaders must work together without a hitch while the tank commander must have absolute control of his fire power and the movement of his vehicle. During moving tank firing the driver must be impressed with his part of the team play. He must notify the gun crew when he is about to take an obstacle, to go over exceedingly rough ground or pick up a new target. He also must be able to maneuver the tank into the most favorable position for the gun crew to fire. Only when tank crews function as smoothly and as efficiently as one man, can practice be had in platoon and company problems. To attempt platoon exercises before the individual crews are highly trained would be a waste of time and ammunition.

■ 17. PROGRESSIVE TRAINING.—*a.* Combat training should first be concentrated on the individual tank crews. When the

crews have been trained, simple platoon problems should be tried, involving the firing of the entire unit. After that, fire and maneuver; one section firing while the other moves to a better position. Throughout, stress must be placed on the platoon leader exerting complete control by means of radio. He must be able to direct its progress and switch its fire from one target to another. Furthermore, if the radio fails, he must be prepared to maintain his control by the use of flag signals; or even, at times, by arm-and-hand signals.

b. Company problems should involve the actual firing in tactical situations. The fullest advantage of range facilities should be taken for these problems. All phases of tactical maneuvering should be covered stressing the attack and tank versus tank actions. Surprise targets should be used as much as possible.

c. Initially all problems should be fired with caliber .30 ammunition. When the company is thoroughly trained in combat firing with this ammunition, combat problems involving the firing of 37-mm and 75-mm ammunition should be conducted. If the crews have been sufficiently trained with subcaliber firing then service firing can be conducted by a series of platoon and company problems. Training in subcaliber combat firing must be complete if training commensurate with the value of service ammunition is to be realized.

SECTION II

TANK CREW AND SECTION

■ 18. ILLUSTRATIVE PROBLEMS.—The following are suggested situations that can be used for both the tank crew and the tank section.

a. (1) Figure 1 represents a practice course to be run by an individual tank for purpose of coordinating the actions of the crew members. Blank ammunition may be used to increase the realism.

(2) The situation in Figure 1 requires the tank commander to move north from the starting point, attacking enemy installation as seen. Orders must be given by the tank commander and carried out by the crew.

(3) *Analysis.*—(*a*) As the tank moves north along the road it is fired on by an enemy machine gun at 1. The tank destroys the crew by its own machine-gun fire and then overruns the position.

(*b*) After destroying the machine gun the tank commander sees the antitank gun at 2; quickly changes direction and approaches it from under cover of the hill, closing in rapidly to crush the gun and crew.

(*c*) From the antitank gun it halts at 3 to observe its further route when it is fired upon by an antitank gun at 4 and a machine gun at 5. The tank attacks the antitank gun, leaving the machine gun for the tanks following.

(*d*) After crushing the antitank gun at 4 the tank halts to observe, sees the CP sign and attacks the CP, giving particular attention to the destruction of radios, telephone and any other means of communication as well as any vehicles in the vicinity.

(*e*) As the tank leaves the CP at 8 it observes a group of infantrymen; it halts and fires but does not overrun.

(*f*) While halted the tank commander observes a mortar in position at 9. The tank destroys it by firing and crushing the mortar and proceeds.

(*g*) When the tank arrives at 10 enemy tank at 11 appears from the woods. The tank at 10 turns and halts to engage the enemy tank. When it has destroyed the enemy tank, the tank proceeds to the finish line and back to the starting position for a critique.

b. (1) Figure 2 presents a typical combat range that can be readily set up for the purpose of training tank crews in coordination and fire control during the attack with live ammunition.

(2) *Analysis.*—(*a*) The tank moves along indicated route, taking under fire infantry men at A.

(*b*) At point B the tank commander observes an enemy machine gun at C and entrenched infantry at D. He directs the fire first at the machine gun then proceeds to fire at the entrenched infantry.

(*c*) At E the tank comes under the fire of the antitank gun at F. The tank commander orders his tank into a defiladed position where he engages the enemy gun.

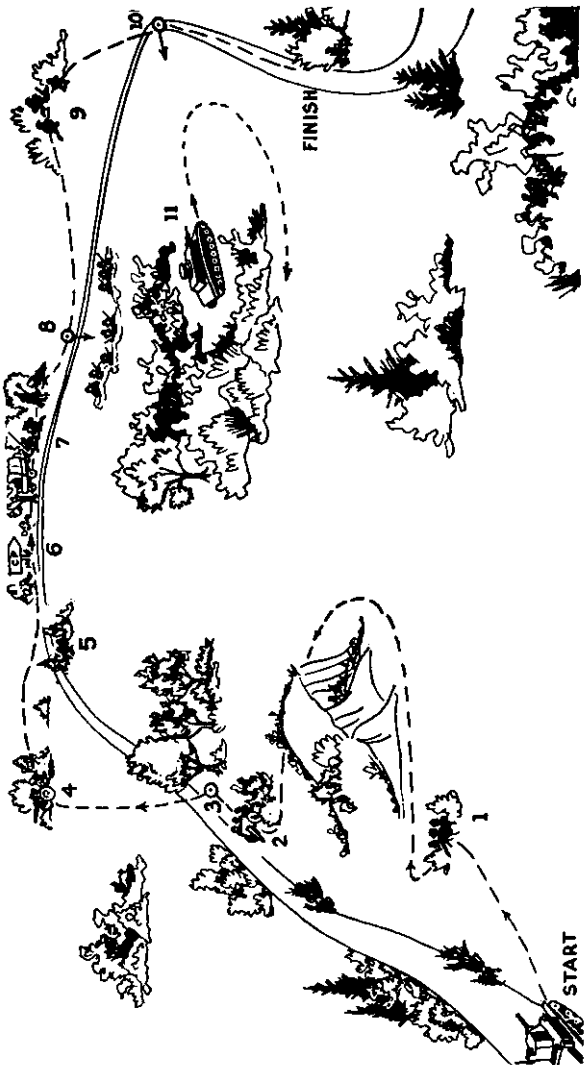

FIGURE 1.—Tank practice course.

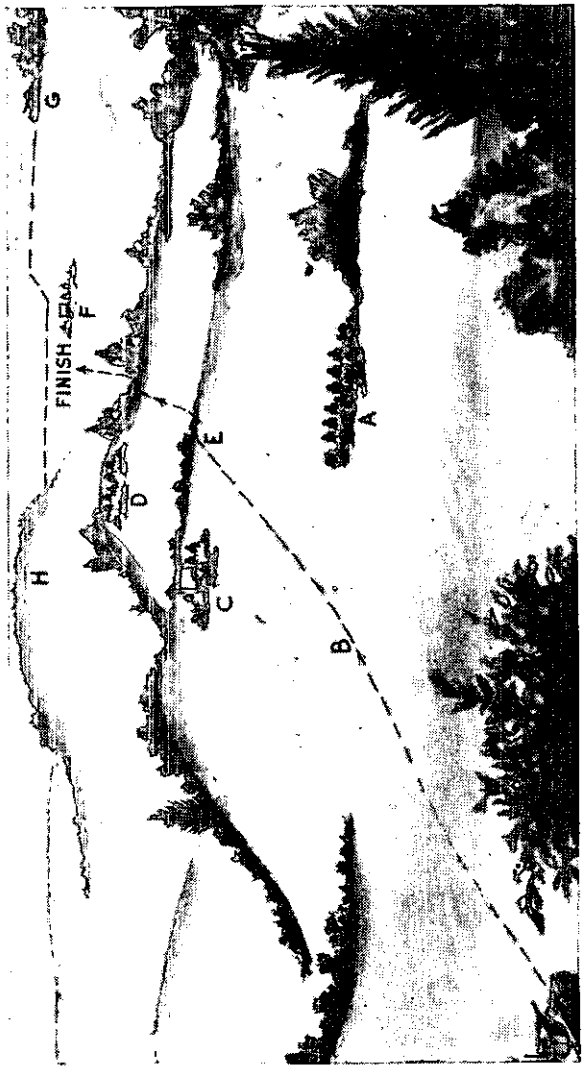

FIGURE 2.—Combat course, tank in the attack.

(*d*) Having destroyed the antitank gun, the tank proceeds to the finish line where the tank commander observes an enemy tank emerging from the woods at G; he halts the tank and directs the fire against the hostile tank.

(*e*) After the hostile tank disappears behind the hill at H, guns are cleared and the tank returns to the starting point.

c. (1) For tank versus tank actions moving targets as described in FM 23–80 may be used to good advantage.

(2) Exercises in which one tank or more to include a platoon chase a tank across country, while firing caliber .30 ammunition, afford excellent training for the gunners and at the same time develop in the crews a sense of confidence in the protection afforded by the armor of the tank. Of course it is advisable to strip the tank of vulnerable accessories such as tools, lights, horn, etc. In addition the crews soon learn from the sound to determine the direction from which the fire is coming.

SECTION III

TANK PLATOON

■ 19. ATTACK.—Problems designed for the tank platoon in the attack should include situations which require the leader to control and maneuver his sections. Radio communication should be stressed. The following are suggested situations.

a. (1) Figure 3 shows a lay-out for a platoon combat range. The purpose is to train the platoon in fire and maneuver.

(2) The situation requires the platoon leader to issue his initial order and to subsequently maneuver his sections by radio control, orders being carried out by the tanks of the platoon.

(3) *Analysis.*—(*a*) The platoon starts from position A with the mission of attacking and destroying enemy installations at B.

(*b*) As the platoon emerges from line of woods it comes under the fire of an antitank gun at C. The platoon leader withdraws his platoon to cover and then sends part of his platoon around to the right to attack the gun while the remainder of his platoon engages it from the woods.

FIGURE 3.—Tank platoon combat range.

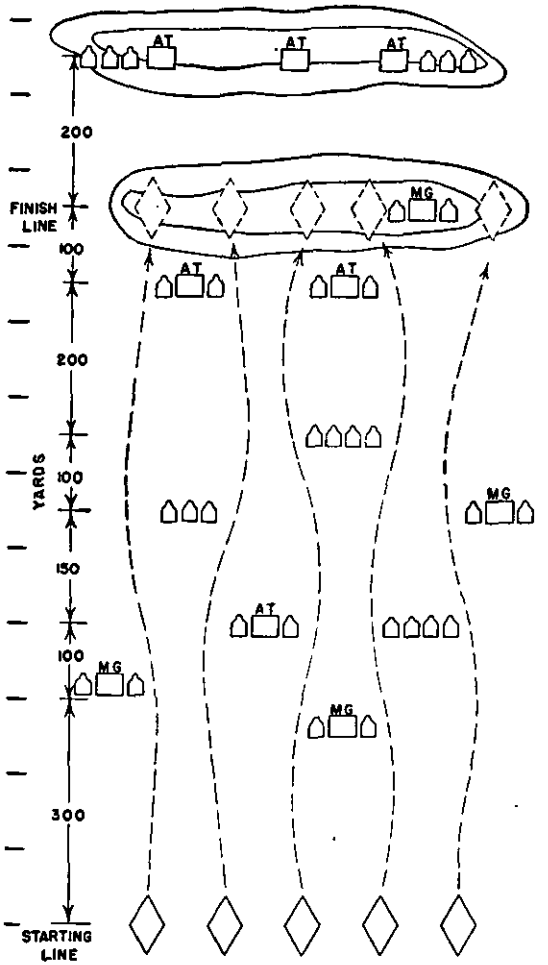

FIGURE 4.—Platoon combat course where firing ranges are limited.

(*c*) After the gun at C has been destroyed he reorganizes and proceeds on his mission when he is attacked by another antitank gun at D. The platoon leader orders two of his tanks up the draw at F and moves the rest into the woods at E where he assists by fire the maneuver of his two tanks up the draw.

(*d*) The machine gun at G is ignored.

(*e*) After destroying the antitank gun at D the platoon proceeds to the attack of B which consists of 3 enemy machine guns and rifle troops.

b. Where firing facilities are very limited, a straight combat course as depicted in figure 4 may be laid out. It is, at best, a poor substitute. Targets may be shifted about as well as shifting the positions of the tanks within the platoon.

■ 20. COMPETITION.—A competition between platoons can be held by running each platoon through a course similar to figure 5, with targets partially concealed; the mission of the platoon, to attack north from A, searching out and destroying the enemy where found and finally rallying in position B, valuation being given to the number of hits, dispersion on personnel targets, total number of hits for ammunition expended and a deduction for targets not found or hit. Such problems after the platoons have progressed in their combat training tend to stimulate interest and improve the units in their combat marksmanship.

■ 21. SECURITY.—In problems on security great stress should be placed on the team work between tanks, i. e., one or more tanks covering the advance of the remainder of the platoon.

a. (1) Figure 6 shows a combat course for a tank platoon acting as the point of an advanced guard.

(2) *Analysis.*—(*a*) The platoon starting out from A is fired upon from an antitank gun C as the lead tank arrives at B. The two lead tanks engage the target while the remainder of the platoon using the hill for cover attacks the enemy from the flank.

(*b*) The platoon then continues on its route to D where it is fired upon from guns located at E and F. The platoon takes cover in the woods on the right of the road; the leader

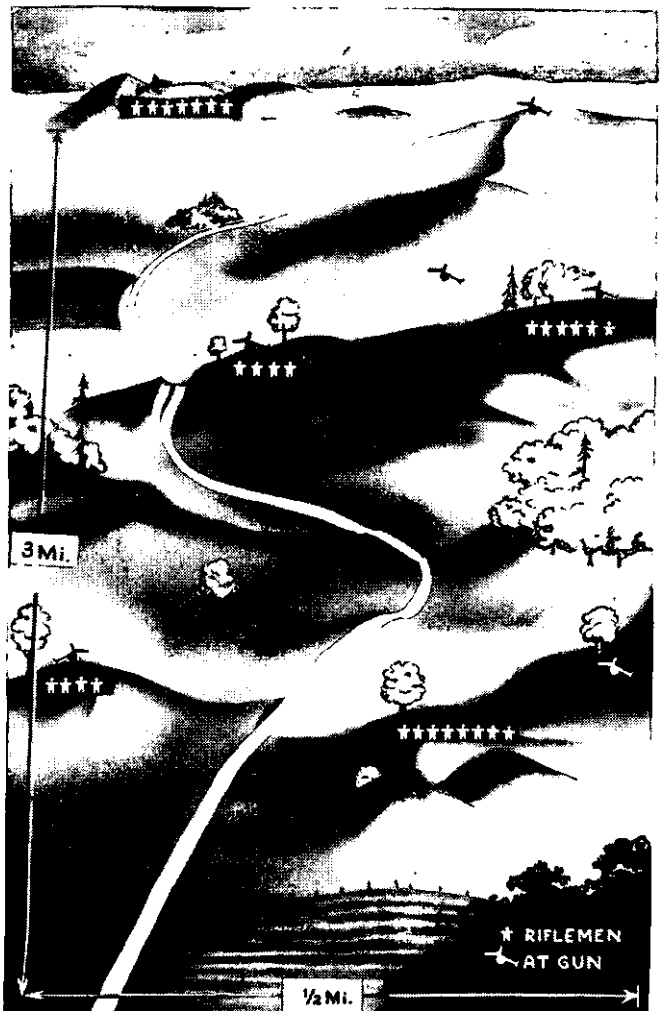

FIGURE 5.—Test course for tank platoons.

then sends part of his platoon through the woods on the left to outflank and destroy the attacking guns.

(c) The point reforms and moves on to where it finds a road block and is fired on from the defending gun. The leader causes two tanks to engage the gun and requires the remainder of the platoon to dismount, work their way around the swamp and attack the gun on foot.

SECTION IV

TANK COMPANY

■ 22. COMPANY PROBLEM.—*a.* Where the terrain will lend itself, one or two company problems should be conducted with attached assault gun and one or more mortars. Combined problems of this nature will be of inestimable value in teaching coordination of all units and the control of the vast fire power that the company commander has under his control.

b. Figure 7 gives an idea for such a course. The company in the assault position at A receives the mission to attack north, rallying at B. The targets call for decisions by the company commander in the employment of his reserve platoon and the attached weapons.

FIGURE 6.—Tank platoon acting as a point.

FIGURE 7.—Combat course for a tank company.

CHAPTER 3

RIFLE, MACHINE GUN, AND MORTAR UNITS

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SECTION I

GENERAL

■ 23. PRIOR TRAINING.—*a.* Before any elements of the armored infantry are permitted to fire combat problems, they should be proficient in marksmanship and have covered a thorough course in combat principles. Tactical walks and the sand table should be used extensively for the instruction of combat principles. This should be followed by squad, platoon and company problems, placing the maximum amount of time and stress on the squad. The use of cover and terrain appreciation should be emphasized throughout the course of instruction.

b. The mortar, antitank and machine-gun units, in addition to the above, should be well trained in reconnaissance and selection and occupation of positions. Leaders should be taught the handling of transportation, the theory of ammunition replenishment, and they should be highly trained in selecting targets, switching fire from primary to secondary targets, and in moving from principle to secondary positions and opening fire quickly.

c. All personnel must have a complete course in firing and in mechanical training for the weapons organic to the half-tracks within the units.

■ 24. UNITS TO FIRE.—*a.* All squads and platoons of each company will be required to engage in combat practice firing. Individual squad problems will be fired before any attempt is made to run the more complicated platoon problems.

b. To teach the coordination of fire power within a platoon, during the latter stages of training, a problem can be drawn up for the platoon through which the squads are first run individually and then the platoon as a whole fires the course. Such a problem suitable for a rifle platoon is presented in paragraph 30.

SECTION II

RIFLE PLATOON

25. FIRE POWER.—The rifle platoon has an enormous amount of fire power of which the personnel must be taught to make the maximum use. The half-tracks mounting machine guns should be used at every opportunity to support the platoon and as a base of fire for maneuvering.

26. RIFLE SQUAD.—The following are suggested rifle squad problems:

a. (1) Figure 8 illustrates a rifle squad in the attack. The squad arrives at A and is given the mission of attacking the enemy position at E. The squad leader is required to issue the necessary orders and carry the attack to a conclusion.

(2) *Analysis.*—(*a*) The squad starts its attack from A with the half-track supporting its advance from a covered position at A.

(*b*) When the squad arrives at B a surprise target of infantry appears at C. The squad leader sends part of his squad along the brush line D to outflank the enemy position.

(*c*) After taking position C the squad, continuing to the attack, is fired upon by a machine gun at F. By bringing up his half-track and fire of the squad the machine gun is reduced and the final objective is taken.

b. (1) Figure 9 presents a possible combat problem for a squad acting as a flank patrol. The squad, part of a moving column, is detached to protect the right flank from surprise attacks from the high ground at C and H.

(2) *Analysis.*—(*a*) The squad having been given its mission at A, proceeds to B where several observers from C discover an enemy patrol D. The squad engages the patrol and then proceeds in the direction of H.

FIGURE 8.—Rifle squad in the attack.

FIGURE 9.—Rifle squad as a flank patrol.

(*b*) En route it is fired upon at E by a machine gun at F. The carrier takes cover at G, the squad leader directing that the machine gun on the half-track, from position, engages the enemy while he maneuvers his squad around the hill to take the enemy gun from the flank.

(c) After knocking out the gun the squad rejoins the column at I.

■ 27. LIGHT MACHINE-GUN SQUAD.—The light machine-gun squad should be given combat problems involving the mechanics of going into positions, shifting fire from one target to another and in advancing by bounds.

a. (1) In figure 10 the machine-gun squad as part of a rifle platoon goes into position at A to support the platoon in its attack against C.

(2) *Analysis.*—(*a*) As the squad gets in position targets at B appear.

(*b*) After firing at B the squad moves forward to B supported by the carrier which remains at A until the squad arrives in its new position.

(c) As the carrier starts forward an enemy machine gun starts firing from D. The squad shifts its fire from C to D.

b. (1) In figure 11 the squad leader is given the mission to take up a defensive position in support of his platoon in the vicinity of A.

(2) *Analysis.*—(*a*) The squad leader should look the ground over carefully, selecting a principle and an alternate position.

(*b*) After taking and preparing his position a target appears at C which he should engage.

(c) During the progress of the firing the leader is informed that mortar fire is striking in his vicinity. The leader causes his squad to move to the alternate position and again opens fire on his target.

■ 28. 60-MM MORTAR SQUAD.—Problems for the 60-mm mortar squad may be designed from the terrain shown in figure 8. For example, the squad supports the attack of a rifle unit by delivering fire on the enemy at C from a position near A. A surprise target appearing at F requires the use of smoke to permit the rifle units to advance. The machine guns on the half-track carrier should be given a mission of protecting

FIGURE 10.—Light machine-gun squad.

FIGURE 11.—Light machine-gun squad in defense.

the mortar crew; it should also receive at times supporting missions in assisting the advance of rifle units or the mortar crew itself.

■ 29. 37-MM GUN CREW.—Problems for combat firing practice for the 37-mm gun crew should be designed to require quick shifting of fires on surprise moving targets and point firing at strongly armored enemy implacements. For construction of moving target ranges see FM 23–80.

a. (1) A range as illustrated in figure 12 might well be worked out. In the situation depicted the 37-mm gun crew has the mission of protecting the left flank of a rifle platoon advancing northeast.

(2) *Analysis.*—(*a*) The crew chief puts his gun into a covered position at A, checking that the carrier has taken a position that affords his gun protection.

(*b*) A tank appears from the woods to the front which the gun takes under fire.

(*c*) After the tank has disappeared the crew chief receives orders to move his gun to the vicinity of C to take under fire an enemy gun bunker at D.

(*d*) The crew chief is required to reconnoiter his route, get the gun in position and open fire.

b. For subcaliber practice with caliber .30 ammunition a great many situations might well be worked up where tanks could be driven from several directions, permitting the gun crew practice in shifting fires.

c. Problems involving surprise targets while the crew is moving along the road should be stressed.

■ 30. PLATOON PROBLEMS.—All squads of the rifle platoon having satisfactorily fired individual combat problems, the platoon is then ready to run combat courses as a unit.

a. (1) Figure 13 illustrates a possible arrangement of targets for a platoon problem.

(2) The platoon leader is given the mission of attacking the ridge B, advancing from the vicinity of A. All target locations are known except those at C, D and the two machine guns at E and F.

(3) The platoon leader issues the necessary orders and conducts the attack, directing the fires of his weapons and the maneuvering of his squads.

FIGURE 12.—37-mm squad in the attack.

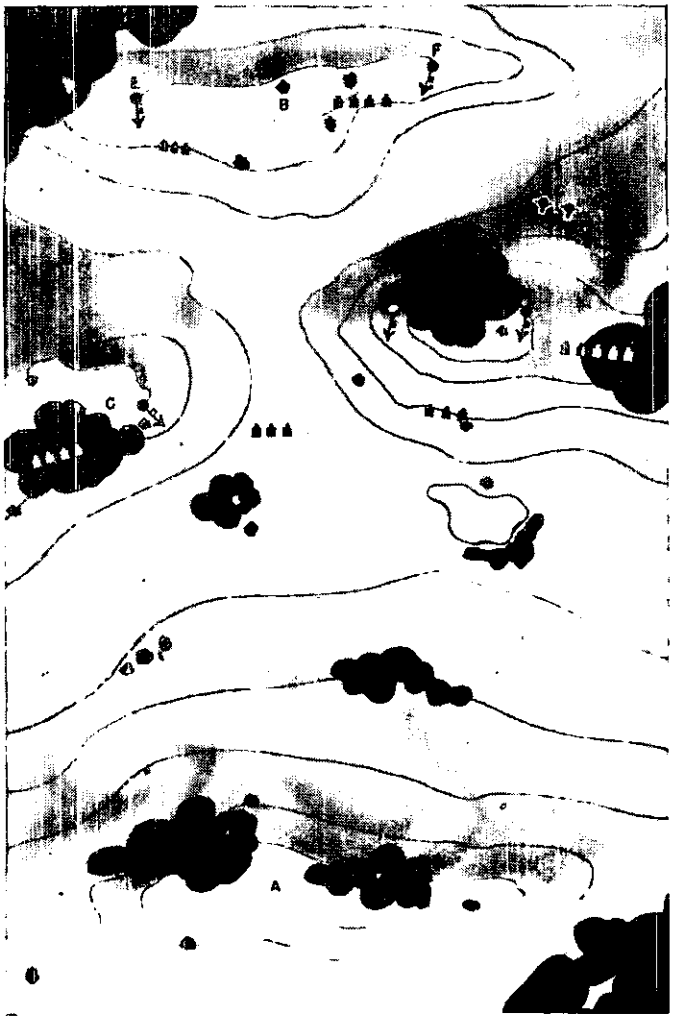

FIGURE 13.—Rifle platoon in the attack.

FIGURE 14.—Rifle platoon as an advance guard.

b. (1) Figure 14 presents a rifle platoon acting as the support of an advance guard moving along road A–B.

(2) *Analysis.*—(*a*) As the lead vehicles arrive at B, it is fired upon from C, a road block.

(*b*) The platoon leader orders his platoon into positions as shown, ordering a double envelopment by his two rifle squads while supporting them by all available automatic fire in the platoon.

SECTION III

MACHINE-GUN PLATOON

■ 31 TRAINING.—*a.* Paragraph 27, illustrating possible combat courses for the machine-gun squad, can also be used for the training of the section of the machine-gun platoon.

b. (1) Figure 15 shows a situation for a machine-gun platoon. A rifle company is held up in the low ground B by enemy fire from C. The platoon leader is given the mission of assisting the company in its advance.

(2) *Analysis.*—(*a*) The platoon leader reconnoiters the ground around A, directs and supervises the occupation of positions and the fire of his platoon.

(*b*) The enemy is reduced and the rifle company has advanced to the ridge C. The platoon leader then moves his platoon forward to engage the enemy at D, being careful to guard against any counterattack as his platoon is moving up.

(*c*) As a continuation of the exercise the leader can be given the mission of taking up a defensive position on the high ground at D after having engaged the targets.

SECTION IV

81-MM MORTAR PLATOON

■ 32. TRAINING.—*a.* Prior to attempting combat practice firing the mortar platoon must have completed its training in marksmanship and tactics. During these phases stress should be placed on field firing as laid down in FM 23–90.

b. Preliminary training accomplished, all combat practice should emphasize speed in execution. All problems should be designed to improve the speed and smoothness in occupy-

FIGURE 16.—Machine-gun platoon supporting an attack.

ing new positions and in going out of action. Observation must be rapid but thorough, followed by clear direct fire orders coupled with rapid and positive fire control.

c. Normally the platoon is held together in order to better support the attacking units with sufficient fire or screening effect.

■ 33. PLATOON PROBLEMS.—No illustrative problems are given here for the individual mortar squad since the following problems can be broken down for the single squad.

a. (1) The following problem, figure 16, presents a mortar platoon supporting tanks in the attack. The platoon leader is given the mission of placing fire on the known antitank guns at B and then following in general support.

(2) *Analysis.*—(*a*) The platoon leader makes his reconnaissance and orders his platoon into position, selects the type of shell and opens fire in accordance with orders.

(*b*) As he lifts his fire he receives, by radio, orders to assist the tanks by placing smoke on enemy antitank guns, in the edge of woods C, that are holding up the attack.

(*c*) The platoon is moved forward into a new position and opens fire.

b. (1) An infantry battalion is attacking (figure 17). The mortar platoon is supporting the attack. The platoon has the mission initially of silencing machine guns at A and thereafter to fire on targets of opportunity and other targets as directed by the battalion commander.

(2) *Analysis.*—(*a*) The platoon leader makes his reconnaissance and orders his platoon into position, selects the type of shell to use and opens fire in accordance with orders.

(*b*) As he lifts his fire from A, the platoon leader receives orders from the battalion commander to silence machine guns firing from the woods B. These guns cannot be definitely located, therefore, area fire is required.

(*c*) The battalion has taken the first hill and is now receiving fire from machine guns at C. The mortar platoon is displaced forward, goes into position and brings fire on C.

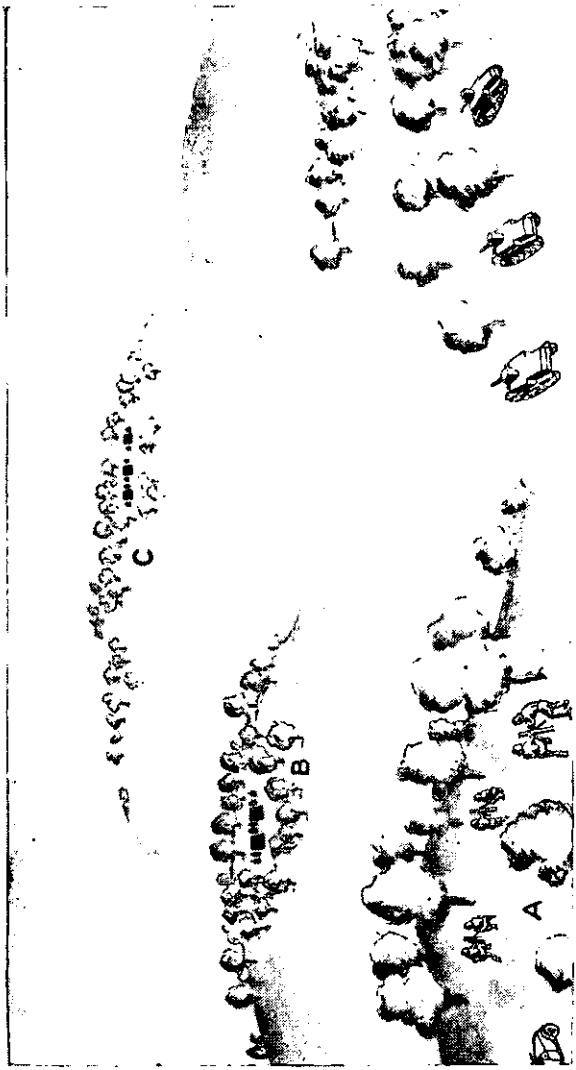

FIGURE 16.—Mortar platoon supporting a tank attack.

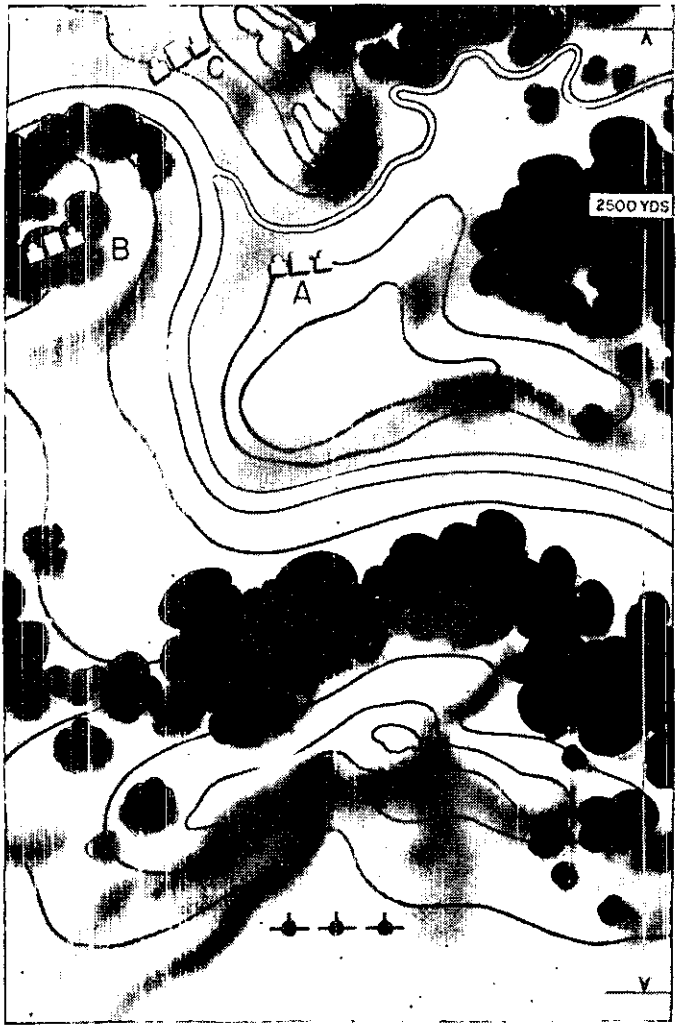

FIGURE 17.—Mortar platoon supporting an infantry battalion in attack.

CHAPTER 4

ASSAULT GUN

■ 34. PRIOR TRAINING.—*a.* Before commencing combat firing the assault gun platoon must have covered completely all phases of marksmanship and tactical training. The ammunition section should be well schooled in the replenishment of ammunition as well as the use of the vehicular weapons with which to afford protection to the gun crews. The drivers must be able to move their vehicles into position from which the gun receives the maximum cover and field of fire.

b. The crews must be trained in the technique of indirect fire, for often situations will arise where the assault gun platoon will be used to fire on emergency artillery targets. Supporting overhead fire may be often called, so that the crews must be able to figure out safety angles. The maximum use should be made of radio communication during all combat problems, including target designations and orders for moving the section or platoon.

c. Targets in the main will be similar for the assault gun platoon supporting an infantry action as in supporting tank units.

■ 35. COMBAT FIRING.—*a.* The combat course outlined in paragraph 29 could well be used for an assault gun problem. In the second phase, the crew should be required to fire three or four shots, shift to another position and again open fire. In all problems the danger in remaining in one position too long should be brought out.

b. When possible the training period of the assault gun platoon should be coordinated with the armored battalion so that the gun crews will obtain experience working with the combat units that they would normally be required to support. Valuable training will be gained by having the section or platoon run through problems with the tank and rifle units.

c. (1) Figure 18 presents a platoon supporting a tank battalion in the attack.

(2) A tank company as part of a battalion is to attack north from A. The assault gun platoon is given the mission of initially supporting the advance of the company from the vicinity of B, placing fire on known enemy antitank gun at C, thereafter advancing in the zone of the company in general support of the battalion.

(3) *Analysis.*—(*a*) The platoon leader reconnoiters for positions and places his guns and opens fire at H hour.

(*b*) After reducing targets at C, the platoon advances to woods D, taking position on northern edge, placing fire on enemy gun bunker E when three or four enemy tanks break from woods F.

(*c*) The platoon leader quickly shifts the fire of his platoon to the tanks; after they have disappeared he causes the fire to again be directed against the gun bunker.

FIGURE 18.—Assault gun platoon supporting a tank attack.

CHAPTER 5

RECONNAISSANCE PLATOON OF THE ARMORED RECONNAISSANCE COMPANY

■ 36. GENERAL.—*a.* Since the reconnaissance platoon will in all probability have to fight in order to accomplish its mission, combat practice firing becomes the concluding and most important phase in the training of the platoon for combat. As it often operates at a considerable distance from friendly troops, it is a self-contained unit. And it must develop maneuverability to a high degree and team work that functions rapidly and smoothly. All leaders should be trained in making quick logical decisions and in the ability to see that such decisions are carried out with dispatch.

b. Before starting combat firing the platoon should have completed their marksmanship and mechanical training. Where time and ammunition are available all personnel should receive training in all weapons of the platoon. Tactical training should be complete with emphasis on the use of cover and maneuver. During this course of training dismounted actions should be stressed, as it will be rare when an engagement can be fought to a successful conclusion by fighting from their vehicles.

■ 37. ILLUSTRATIVE PROBLEMS.—*a.* Combat courses for the scout and gun sections can be conducted as described in paragraphs 28 and 29 and chapter 4.

b. The armored car section should, while making the maximum use of the vehicle weapons, dispatch troops on foot for flanking or small encircling maneuvers.

(1) *Figure 19.*—The armored car section on a road reconnaissance is fired upon by an enemy machine gun from B as it reaches A.

(2) *Analysis.*—(*a*) The section takes cover in the woods on the left, engaging the enemy with the vehicle weapons.

(*b*) The section leader causes part of his section to dismount and sends them around ridge C to attack the enemy from the flank.

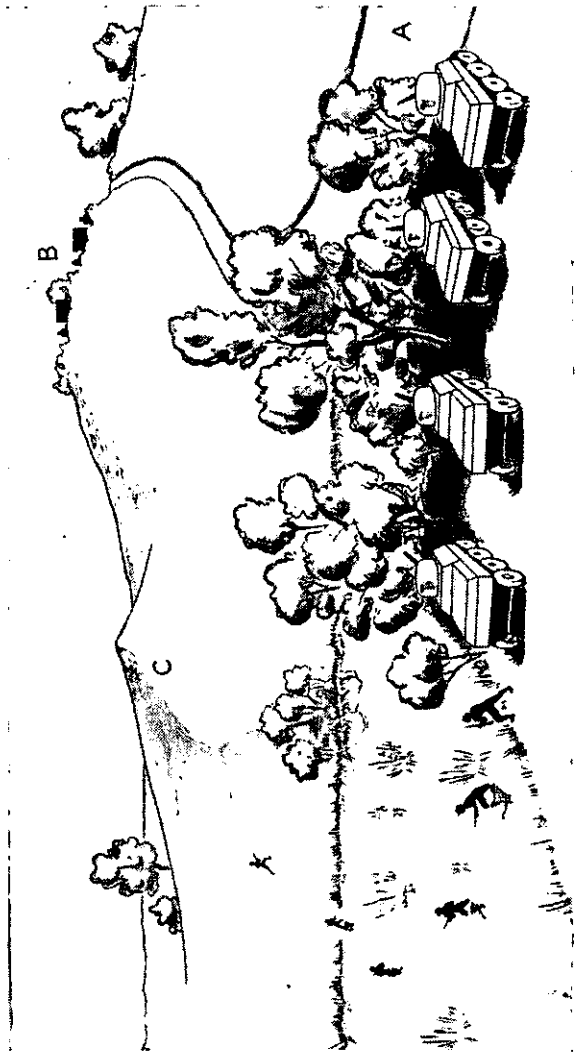

FIGURE 19.—Combat course for armored car section.

c. (1) *Figure 20.*—The platoon, on a reconnaissance mission, moving along road A–B, is held up by a road block at C as it reaches B.

(2) *Analysis.*—The platoon leader orders his platoon into action, using all of his available fire power to reduce the opposition as quickly as possible that he might continue on his mission with the least expenditure of time.

d. (1) *Figure 21.*—The platoon is advancing along road A–B with the mission of taking and holding the high ground at D when it is fired on by enemy machine guns and an antitank gun at C.

(2) *Analysis.*—(*a*) The platoon leader orders his platoon under cover of the woods on either side of the road.

(*b*) The platoon engages the enemy with its heavy guns while the armored car section moves under cover through E to attack the enemy from their flank.

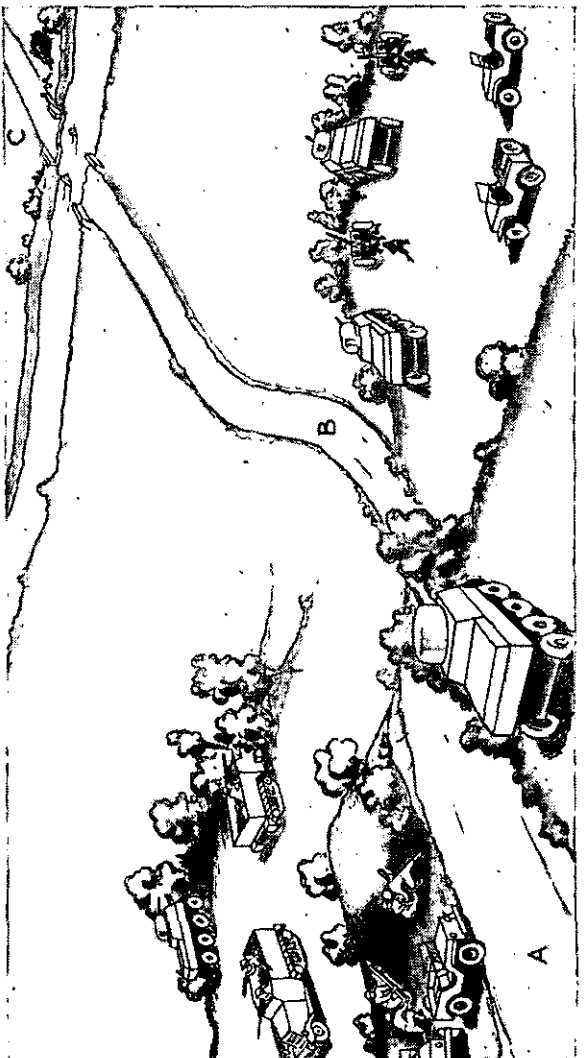

FIGURE 20.—Reconnaissance platoon reducing a road block.

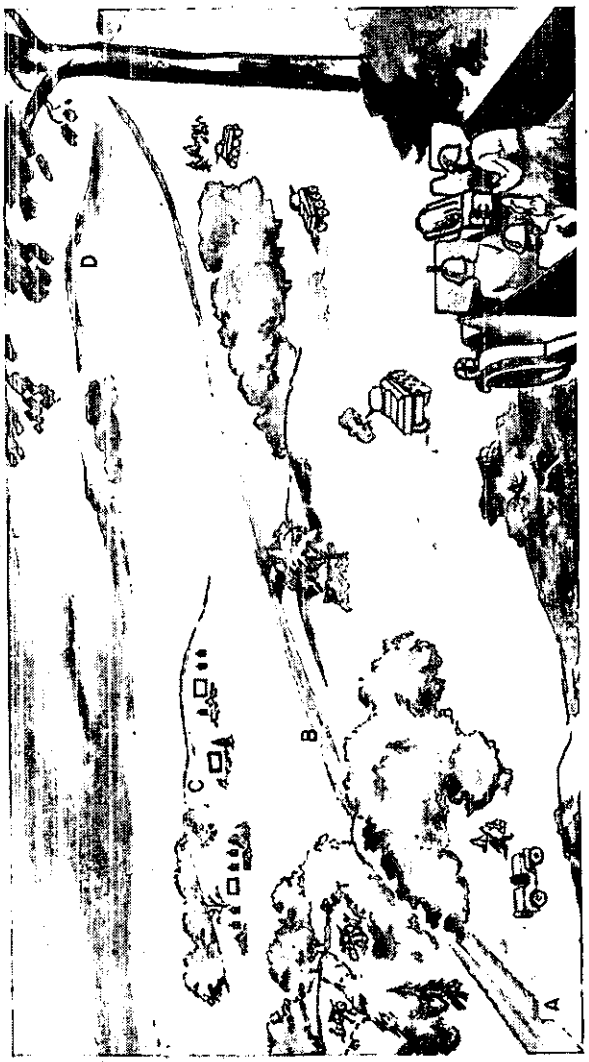

FIGURE 21.—Reconnaissance platoon combat course.

APPENDIX I

UMPIRE'S CHECK LIST

(Place) (Date)

1. Combat practice problem for _____
(Unit firing problem)
2. Problem number _____
3. Weather conditions _____
4. Details of performance.
   a. Problem started at _____
   Problem concluded at _____
   Total lapse of time _____
   b. Reconnaissance:
   Was it thorough? _____
   Was it planned? _____
   Time consumed? _____
   c. Initial orders:
   Were they clear and brief? _____
   Did they contain all necessary information? _____
   How and where issued _____
   d. Initial deployment:
   Use of cover _____
   Position of leader _____
   Employment of transportation _____
   Selection of routes _____
   e. Subsequent action:
   Orders _____
   Use of cover and selection of routes _____
   Employment of transportation _____
   Fire and movement _____
   _____
   Were proper weapons and types of ammunition used?
   _____
   Was fire brought on targets promptly? _____
   Was fire opened prematurely? (At excessive ranges.)
   _____
   Team work _____

f. Actions at rallying point:
Security _____
Reorganization _____
Check of vehicles _____
Did leader report to higher commander? _____
g. Was the unit properly controlled? _____
h. Were proper security measures taken? _____
i. Ammunition:
Ammunition fired _____
Total ammunition allowed _____
Percentage of hits _____
Percentage of targets hit _____
Was ammunition used effectively? _____

5. Conclusions:
a. Would the solution have been successful? _____
b. Is the combat proficiency of the unit at the present time satisfactory? _____

_____
(Signature)

APPENDIX II

FORM FOR A COMBAT PROBLEM

HEADQUARTERS 901ST ARMORED REGIMENT
Fort Knox, Kentucky
January 30, 1942.

Combat Firing Problem No. 6.
Map: (Figure 6, BFM 17–15.)

THE TANK PLATOON AS THE POINT OF AN ADVANCED GUARD

(This problem is issued in two parts: Part I for the participating troops; Part II for the umpires and range officers.)

PART I

1. UNITS TO FIRE.—One platoon from each company, except Headquarters and Service, all other members of the company observing.

2. EQUIPMENT.—*a.* Full field.
b. Ammunition:
(1) 500 rounds cal. .30 per machine gun.
(2) 10 rounds 37-mm per gun.

■ 3. SITUATION.—The platoon is assigned as the point of an advanced guard of a column moving along the road north from RJ 723. Contact with the enemy has been lost but isolated groups of resistance are expected to be met.

■ 4. ORDERS.—There has been some enemy activity to our front for the past several days. Isolated enemy groups can be expected to harass our advance.

Our battalion has the mission of seizing and holding the town of "T" 20 miles north of here. Company — will be the advanced guard for the battalion movement; your platoon will act as the point.

You will move out at H hour taking distance at once and maintain an average speed of 15 miles per hour. This sketch will give you the route.

I will be at the head of the advanced party which will follow at 1,000 yards.

Are there any questions?

■ 5. REQUIREMENT.—Actions and orders of the platoon leader, movement and subsequent actions by the platoon as the situation develops.

■ 6. RESTRICTIONS.—*a.* All firing will be restricted to within limits designated by red flags. Each target or group will be limited separately.

b. If at any time a doubt arises as to safety limitations, firing will be ceased and an umpire called for a decision.

PART II

(Not to be distributed to participating units)

■ 1. OBJECT.—*a.* To teach the combat principles of a tank platoon acting as the point of an advanced guard.

b. To stress necessity of fire and maneuver including the use of dismounted tank crews.

■ 2. PREPARATION OF RANGE.—See sketch (fig. 6).

a. Range "C" will be used.

b. Range guards: 5 privates.

c. Range detail: 1 NCO and 4 privates. Uniforms: fatigue.
d. Materials:

4—4' x 5' frames.
12—"F" silhouette targets.
16—6' stakes.
12—3' stakes.
4—Orange colored flags w/staffs.
12—Large red flags to outline safety limits.
Paste and pasters.
Several logs or old RR ties for road block.
1—Truck.

■ 3. POINTS FOR CRITICISM.—*a.* Platoon leader's initial and subsequent orders.
b. Use of cover.
c. Promptness in execution of maneuvers.
d. Rapidity of opening fires.
e. Control.

■ 4. REMARKS.—*a.* Every latitude should be allowed each platoon leader in the development of the situation with the least amount of interference.
b. Umpires will have gone through this problem themselves prior to presentation to the platoons.
By order of:

J. J. DOE
Colonel, 901st AR
Commanding

OFFICIAL:
R. R. ROE
Captain, 901st AR
Adjutant

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